chemotherapy against the neuronal markers PGP 9.5, CGRP and substance P (SP). The number of stained nerves was counted manually. PGP 9.5- and CGRP-positive nerves were significantly reduced in hypospadiac prepuce. PGP 9.5-fibers were found only in the reticular dermis of hypospadiac skin with less localization in epidermis and papillary dermis, but in normal skin, fine fibers were distributed in all layers. CGRP nerves could be analyzed around blood vessels only. SP fibers were increased and were even mainly localized around the blood vessels.

Trauma and ischemia release neuropeptides from sensory nerves into the surrounding tissue to improve inflammation and wound healing. The prominent effect of CGRP is vasodilatation and chemotaxis of neutrophils and T lymphocytes. SP causes vasodilatation and opens endothelial gaps resulting in edema. Chemotaxis to inflammatory cells and promotion of fibroblast and keratinocyte proliferation are known together with increase of EGF expression. Denervation or hypo- innervation may slow down wound healing by the reduction of inflammatory response and blood flow to the skin. Whether the significant difference in the distribution and density of nerve fibers in hypospadiac prepuce is responsible for healing disturbances and the development of urethral fistulae remains unclear and needs a long-term follow-up. Even the effect of preoperative epidural block and tourniquet on the immunostaining is unknown. Further studies are necessary to elaborate the physiological role of sensory nerves in the prepuce. — P. Schmittenthaler

A prospective audit of hypospadias correction in a regional pediatric surgery center

The aim of the study was to prospectively review the management and treatment of hypospadias in a single regional center, and in particular, to assess the spectrum of cases treated, techniques used and to determine the nature of complications. One hundred and fifty-eight consecutive boys underwent hypospadias repair over a 36-month period. Information was collected prospectively and included the site of the urethral meatus, presence of chordee, surgical technique employed, use of urinary diversion, and the prescription of postoperative antibiotics and analgesics. One hundred and fifty-eight procedures for hypospadias were performed. Single-stage reconstruction was carried out in 145 boys. GRAP (glandular reconstruction and prepuceplasty) repair was the most common operation employed. (n = 112). The overall fistula rate was 11.7%, with the majority of patients having a satisfactory functional and cosmetic outcome. It is concluded that a variety of techniques can be employed to provide satisfactory correction of hypospadias with an increasing emphasis on single-stage day case procedures. GRAP repair is the favored option for distal hypospadias and incorporates preservation of the prepuce. — Thomas A. Angerpointner

Prolonged stenting does not prevent obstruction after TIP-repair when the glans was deeply incised

The aim of this study was to evaluate whether prolonged postoperative stenting may reduce the risk of obstruction of the neo-urethra after TIP repair with deep glandular incision. Twenty-seven patients were operated on for penile hypospadias, using the TIP technique described by Snodgrass. In contrast to a previous study with 8-10 days of postoperative catheter drainage, the indwelling transurethral catheter was kept in place for 12-14 days. Deep incision of the urethral plate up to the tip of the glans is the most remarkable surgical detail, resulting in a meatus on the top of the glans, but in a defect on the dorsal rim of the neomeatus as well. After 3-6 months, 22 patients were re-investigated using a scheme to describe the position of the neo-meatus. Uroflowmetry was also performed. Information was gained by phone in 3 children; 2 patients were lost to follow-up. Two patients returned with a significant obstruction, including a urethrocatheter fistula in one. In contrast to the good assessment by parents and compared to the early appearance after catheter removal, a change in meatal position was observed in the majority of patients. Only 6 children preserved an unchanged meatal position, whereas the meatus lost its oval or slit-like shape as well as its position on the tip of the glans in 16 patients. However, despite one obstructive meatus in the coronal position, 15 patients showed sufficient size and position of the meatus underneath the tip of the glans. Uroflowmetry revealed reduced peak-flow values (mean: 8.1 ml/s) in some of the 9 patients evaluated. It is thus concluded that prolonged stenting does not give better results in those TIP repairs in whom the urethral plate was incised across the rim of the neo-meatus. The early excellent aspect of the glans after stent removal is often impaired by partial closure of the glans incision with a short-term change in size and position of the meatus. To prevent this, the rim of the meatus should be kept completely epithelialized during reconstruction. — Thomas A. Angerpointner

Clinical predictors for differential diagnosis of acute scrotum

Accurate and early diagnosis of acute scrotum is of the utmost importance to avoid testicular loss and/or needless surgery. The aim of this study was to analyse the clinical presentation and physical examination parameters together with the results of imaging techniques in order to find predictors for the differential diagnosis of acute scrotum with special regard to testicular torsion (TT). One hundred and sixty children with a mean age of 12.2 years were included. The study group was subdivided into three groups: “testicular torsion (TT)”, “torsion of testicular appendage (TTA)” and “epididymo-orchitis (EO).” The mean duration of symptoms was 15 hours. No significant differences were noted between the groups with regard to mean age and duration of symptoms.